

CLAIMS

What is Claimed Is:

1 1. A method of recording compatibility information on a recording medium,
2 comprising:
3 providing a physical format information zone having a reserved zone; and
4 recording extended part version information in the reserved zone of the physical
5 format information zone.

1 2. The method of claim 1, wherein the recording of the extended part version
2 information further comprises recording a detailed extended part version in the reserved zone.

1 3. The method of claim 2, wherein the recording of the extended part version
2 information further comprises recording a latest part version having recording compatibility
3 with a recording/reproducing apparatus of a given specification level in the reserved zone.

1 4. The method of claim 3, wherein the recording of the extended part version
2 information further comprises recording a latest part version having reproducing compatibility
3 with the recording/reproducing apparatus in the reserved zone.

1 5. The method of claim 4, wherein the recording of the detailed extended part version,
2 the recording of the latest part version having recording compatibility with the
3 recording/reproducing apparatus, and the recording of the latest part version having
4 reproducing compatibility with the recording/reproducing apparatus, each further comprise
5 recording an integer part and a first decimal place in the reserved zone.

1 6. The method of claim 5, wherein the recording of the detailed extended part version,
2 the recording of the latest part version having recording compatibility with the
3 recording/reproducing apparatus, and the recording of the latest part version having
4 reproducing compatibility with the recording/reproducing apparatus each further comprise
5 recording a second decimal place immediately after the first decimal place.

1 7. The method of claim 6, further comprising recording said integer part, said first
2 decimal place, and said second decimal place in the form of n.xy.

1 8. The method of claim 7, wherein n represents a specification change, x represents a
2 specification change having no compatibility with the recording/reproducing apparatus, and y
3 represents a minor change having recording/reproducing compatibility with the
4 recording/reproducing apparatus.

1 9. The method of claim 8, further comprising recording non-extended part version
2 information in an unreserved zone of the physical format information zone, wherein said
3 non-extended part version information indicates that the extended part version information is
4 recorded in a different location.

1 10. A recording medium comprising:
2 a physical format information zone having a reserved zone; and
3 extended part version information in the reserved zone of said physical format
4 information zone.

1 11. The recording medium of claim 10, wherein said extended part version information
2 further comprises a detailed extended part version.

1 12. The recording medium of claim 11, wherein said extended part version information
2 further comprises a latest part version having recording compatibility with a
3 recording/reproducing apparatus of a given specification level.

1 13. The recording medium of claim 12, wherein said extended part version information
2 further comprises a latest part version having reproducing compatibility with the
3 recording/reproducing apparatus.

1 14. The recording medium of claim 13, wherein said detailed extended part version,
2 said latest part version having recording compatibility with the recording/reproducing
3 apparatus, and said latest part version having reproducing compatibility with the
4 recording/reproducing apparatus each further comprise an integer part and a first decimal
5 place.

1 15. The recording medium of claim 14, wherein said detailed extended part version,
2 said latest part version having recording compatibility with the recording/reproducing
3 apparatus, and said latest part version having reproducing compatibility with the
4 recording/reproducing apparatus each further comprise a second decimal place immediately
5 after said first decimal place.

1 16. The recording medium of claim 15, wherein said integer part, said first decimal
2 place and said second decimal place are in the format n.xy.

1 17. The recording medium of claim 16, wherein n represents a specification change, x
2 represents a specification change having no compatibility with the recording/reproducing

3 apparatus, and y represents a minor change having recording/ reproducing compatibility with
4 the recording/reproducing apparatus.

1 18. The recording medium of claim 17, wherein said reserved zone is 6 bytes in size,
2 and said detailed extended part version, said latest part version having recording compatibility
3 with the recording/reproducing apparatus, and said latest part version having reproducing
4 compatibility with the recording/reproducing apparatus, are each 2 bytes in size.

1 19. The recording medium of claim 18, wherein said integer part, said first decimal
2 place and said second decimal place are each 4 bits in size.

1 20. The recording medium of claim 19, wherein said physical format information zone
2 further comprises an unreserved part version zone 4 bits in size, wherein said unreserved part
3 version zone is located at a byte position 0 of said physical format information zone, and said
4 reserved zone of said physical format information zone is located at a byte position 17 through
5 a byte position 22 of said physical format information zone.

1 21. The recording medium of claim 20, wherein said detailed extended part version is
2 located at said byte position 17 through a byte position 18 of said physical format information
3 zone, said latest part version having recording compatibility with the recording/reproducing
4 apparatus is located at a byte position 19 through a byte position 20 of said physical format
5 information zone, and said latest part version having reproducing compatibility with the
6 recording/reproducing apparatus is located at a byte position 21 through said byte position 22
7 of said physical format information zone.

22. The recording medium of claim 21, wherein said integer part is located at a bit 8 through a bit 11 of said byte positions 17 through 22 of said physical format information zone, said first decimal place is located at a bit 4 through a bit 7 of byte positions 17 through 22 of said physical format information zone, and said second decimal place is located at a bit 0 through a bit 3 of byte positions 17 through 22 of said physical format information zone.

23. The recording medium of claim 22, wherein the recording medium is a digital versatile disc (DVD).

24. A method of determining compatibility between a recording medium and a recording/reproducing apparatus, comprising:

- installing said recording medium in said recording/reproducing apparatus;
- comparing a base part version of the recording/reproducing apparatus with a detailed extended part version stored in a reserved zone of a physical format information zone of said recording medium; and
- determining recording compatibility based upon said step of comparing said base part version with said detailed extended part version.

25. A method of determining compatibility between a reproducing medium and a recording/reproducing apparatus, comprising:

- installing said reproducing medium in said recording/reproducing apparatus;
- comparing a base part version of the recording/reproducing apparatus with a detailed extended part version stored in a reserved zone of a physical format information zone of said reproducing medium; and
- determining reproducing compatibility based upon said step of comparing said base part version with said detailed extended part version.

1 26. The method of claim 24, wherein said comparing of said base part version with
2 said detailed extended part version further comprises comparing said base part version with a
3 latest part version having recording compatibility with the recording/reproducing apparatus
4 stored in said reserved zone.

5 27. The method of claim 26, further comprising:
6 comparing said base part version with a latest part version having reproducing
7 compatibility with the recording/reproducing apparatus stored in said reserved zone; and
8 determining a reproducing compatibility between the recording medium and the
9 recording/reproducing apparatus based upon said step of comparing said base part version with
10 said latest part version having reproducing compatibility with the recording/reproducing
11 apparatus.

1 28. The method of claim 27, wherein said reserved zone is 6 bytes in size, and said
2 detailed extended part version, said latest part version having recording compatibility with the
3 recording/reproducing apparatus, and said latest part version having reproducing compatibility
4 with the recording/reproducing apparatus are each in the form of $n.xy$, wherein n represents a
5 specification change, x represents a specification change having no compatibility with the
6 recording/reproducing apparatus with the recording/reproducing apparatus, and y represents a
7 minor change having recording/reproducing compatibility with the recording/reproducing
8 apparatus.

1 29. The method of claim 28, wherein said reserved zone is located at a byte position
2 17 through a byte position 22 of said recording medium.

1 30. The method of claim 27, wherein if the determining of the recording compatibility
2 indicates that there is recording compatibility, then recording is permitted, and if the
3 determining of the recording compatibility indicates that there is not recording compatibility,
4 then recording is prohibited;

5 and if the determining of the reproducing compatibility indicates that there is
6 reproducing compatibility, then the reproducing is permitted, and if the determining of the
7 reproducing compatibility indicates that there is not reproducing compatibility, then
8 reproducing is prohibited.

1 31. A recording/reproducing apparatus, comprising:
2 a control unit to record extended part version information in a reserved zone of
3 a physical format information zone of a recording medium, and
4 a reading unit to read the extended part version information from the recording
5 medium.

1 32. The recording/reproducing apparatus of claim 31, wherein the extended part
2 version information comprises a detailed extended part version.

1 33. The recording/reproducing apparatus of claim 32, wherein the extended part
2 version information further comprises a latest part version having recording compatibility with
3 the recording/reproducing apparatus in the reserved zone.

1 34. The recording/reproducing apparatus of claim 33, wherein the extended part
2 version comprises a latest part version having reproducing compatibility with the
3 recording/reproducing apparatus.

1 35. The recording/reproducing apparatus of claim 34, wherein the extended part
2 version information in the reserved zone comprises an integer part and a first decimal place.

1 36. The recording/reproducing apparatus of claim 35, wherein the extended part
2 version information in the reserved zone comprises a second decimal place immediately after
3 said first decimal place.

1 37. The recording/reproducing apparatus of claim 36, wherein the control means
2 records said integer part, said first decimal place, and said second decimal place in the form
3 n.xy.

1 38. The recording/reproducing apparatus of claim 37, wherein n represents a
2 specification change, x represents a specification change having no compatibility with the
3 recording/reproducing apparatus, and y represents a minor change having
4 recording/reproducing compatibility with the recording/reproducing apparatus.

1 39. A recording/reproducing apparatus having a base part version that receives a
2 recording medium having a detailed extended part version stored in a reserved zone of a
3 physical format information zone, comprising:

4 a reading unit to read the detailed extended part version from the recording medium;
5 and

6 a comparing unit to compare the base part version with the detailed extended part
7 version in the reserved zone of said recording medium, said comparing unit further determines
8 recording compatibility between the recording/reproducing apparatus and the recording
9 medium based upon the comparing of the base part version and the detailed extended part
10 version.

1 40. A recording/reproducing apparatus having a base part version that receives a
2 recording medium having a detailed extended part version stored in a reserved zone of a
3 physical format information zone, comprising:

4 a reading unit to read the detailed extended part version from the recording
5 medium; and

6 a comparing unit to compare the base part version with the detailed extended
7 part version in the reserved zone of said recording medium, said comparing unit further
8 determines reproducing compatibility between the recording/reproducing apparatus and the
9 recording medium based upon the comparing of the base part version and the detailed extended
10 part version.

1 41. The recording/reproducing apparatus of claim 40, wherein said detailed extended
2 part version further comprises a latest part version having recording compatibility, and the
3 comparing unit compares said base part version with said detailed extended part version by
4 comparing said base part version with the latest part version having recording compatibility
5 with the recording/reproducing apparatus stored in said reserved zone.

1 42. The recording/reproducing apparatus of claim 41, wherein said detailed extended
2 part version further comprises a latest part version having reproducing compatibility with the
3 recording/reproducing apparatus, and the comparing unit determines reproducing compatibility
4 between the recording/reproducing apparatus and the recording medium based upon comparing
5 of the base part version and the latest part version having reproducing compatibility.

1 43. The recording/reproducing apparatus of claim 42, wherein if the base part version
2 of the recording/reproducing apparatus is a version prior to the latest part version having

3 recording compatibility with a recording/reproducing apparatus, then writing is prohibited, and
4 if the base part version of the recording/reproducing apparatus is a version later than the latest
5 part version having recording compatibility with the recording/reproducing apparatus, then
6 recording and updating can be performed.

1 44. The recording/reproducing apparatus of claim 43, wherein said detailed extended
2 part version, said latest part version having recording compatibility, and said latest part version
3 having reproducing compatibility are each in the form of n.xy, wherein n represents a
4 specification change, x represents a specification change having no compatibility with a
5 recording/reproducing apparatus, and y represents a minor change having
6 recording/reproducing compatibility with a recording/reproducing apparatus.

1 45. An optical disc having extended part version information stored thereon, wherein
2 the extended part version information is used to determine in a recording/reproducing
3 apparatus whether recording/updating or reproducing can be performed on the recording
4 medium which is made in compliance with a newly revised specification.

1 46. A recording medium having an updated specification which maintains
2 recording/updating compatibility with a recording/reproducing apparatus, said recording
3 medium further comprising a latest part version which maintains reproducing compatibility
4 with said recording/reproducing apparatus, wherein said part version is recorded on said
5 recording medium having an updated specification such that data is recordable/updatable or
6 reproducible by a recording/reproducing apparatus having an existing specification.